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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/030,825	01/11/2002	Yasunori Takada	56769 (71526)	2372

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EXAMINER	
FISHER, ABIGAIL L	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/030,825	TAKADA ET AL.	
	Examiner	Art Unit	
	ABIGAIL FISHER	1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 November 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,7-9,13,14,16 and 17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,7-9,13,14,16 and 17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *11/28/08*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Receipt of Amendments/Remarks filed on November 23 2008 is acknowledged. Claims 2-6, 10-12 and 15 were/stand cancelled. Claims 1, 7-8, 13 and 17 were amended. Claims 1, 7-9 and 13-14 and 16-17 are pending.

Rejections and/or objections not reiterated from previous office actions are hereby withdrawn. The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set presently being applied to the instant application.

Information Disclosure Statement

The information disclosure statement filed 11/28/08, specifically item CA, fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

The rejection of claims 9 and 17 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter

which applicant regards as the invention is **withdrawn** in light of Applicants' amendments filed on November 23 2008 amending the claim to one or more.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Applicant Claims
2. Determining the scope and contents of the prior art.
3. Ascertaining the differences between the prior art and the claims at issue, and resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The rejection of claims 1, 7 and 10 under 35 U.S.C. 103(a) as being unpatentable over Patel et al. (US Patent No. 5340872, cited in the Office action mailed on 12/28/07) is **withdrawn** in light of Applicants' amendments filed on November 23 2008 amending claim 1 to be directed to a non-aqueous patch.

Claims 1, 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ledger et al. (US Patent No. 5120545, cited in the Office action mailed on 12/28/07) in view of Inagi et al. (US Patent No. 5773028, cited in the Office action mailed on 12/28/07).

Applicant Claims

Applicant claims a preparation comprising sodium diclofenac and ammonium chloride, wherein the ammonium chloride is blended at the range of from 0.5 to 10 fold (mole/mole) based on the sodium diclofenac.

Determination of the Scope and Content of the Prior Art (MPEP §2141.01)

Ledger et al teaches a matrix for transdermal administration of a drug and an antigen processing-inhibiting agent is disclosed (abstract). 0.2%-20% weak base antigen processing-inhibiting agent of the drug is disclosed (column 9 lines 64-68). Ammonium chloride is specified (column 5 line 34). The amounts exemplified are 0, 2, 4 or 8 wt%. It is taught that the incorporation of drugs or agents are intended to have their broadest interpretation as to any therapeutically active substance which is to be delivered (column 4, lines 35-37). Therapeutic areas include analgesics and anti-

inflammatories, among others (column 4, lines 42-61). One specific analgesic agents taught is ketoprofen (column 4 lines 45 and 63). An adhesive layer containing the agent and drug is specified (column 7 lines 8-9). Ointments are disclosed (column 6 line 37).

Ascertainment of the Difference Between Scope the Prior Art and the Claims *(MPEP §2141.012)*

Ledger et al. do not specify that sodium diclofenac can be incorporated. However, this deficiency is cured by Inagi et al.

Inagi et al. teach that ketoprofen and sodium diclofenac are both analgesic agents (column 8. lines 1-4).

Finding of Prima Facie Obviousness Rational and Motivation (MPEP §2142-2143)

It would have been obvious to one of ordinary skill in the art to combine the teachings of Ledger et al. and Inagi et al. and utilize sodium diclofenac. One of ordinary skill in the art would have been motivated to replace ketoprofen with sodium diclofenac as both are taught by Inagi et al. as functional equivalents. Furthermore, the selection of a specify drug is considered prima facie obvious depending on the desired condition/symptoms to be treated.

Regarding the claimed amounts of ammonium chloride, 0 to 8 wt % of ammonium chloride correlates to 0 to 0.15 mols. 0.2-20% of sodium diclofenac correlates to 0.06 mmol to 0.06 mols. Therefore, the amounts and corresponding ratio overlaps with the instant claims. In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a *prima facie* case of obviousness exists. **See MPEP 2144.05 [R-5]**

Absent any evidence to the contrary, and based upon the teachings of the prior art, there would have been a reasonable expectation of success in practicing the instantly claimed invention. Therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made.

Response to Arguments

Applicants argue that (1) Ledger does not disclose diclofenac. Applicants argue that (2) Ledger mentions ammonium chloride as a weak base to raise the pH, which is not relevant to the presently claimed percutaneously absorbable preparation. Applicants argue that (3) Ledger cannot render obvious the presently claimed non-aqueous patch. Applicants argue that (4) Inagi does not teach or suggest the use of sodium diclofenac in a non-aqueous system. Applicants argue that (5) any *prima facie* case of obviousness is rebutted by evidence of the unexpected properties of the claimed preparations. The specification show the skin permeability rate of a composition with and without ammonium chloride. The composition with the ammonium chloride displayed unexpectedly superior properties and cannot be obvious.

Applicant's arguments filed November 23 2008 have been fully considered but they are not persuasive.

Regarding applicants first argument, the examiner recognizes that sodium diclofenac is not specifically disclosed. That is why Inagi et al. is utilized. Inagi et al. teach that sodium diclofenac and ketoprofen, a specifically disclosed drug, are functional equivalents.

Regarding applicants second argument, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985). Ledger et al. teach compositions that comprise ammonium chloride and a drug. The larger disclosure of suitable drugs that can be incorporated demonstrate that the type of drug is not critical to the invention and therefore, it would have been obvious to incorporate sodium diclofenac as it is taught as a functional equivalent of specific drugs mentioned. Therefore, the instant invention would have been obvious to one of ordinary skill in the art based on the teachings of Leger et al. and Inagi et al.

Regarding applicants third argument, it appears that Applicants are arguing that Ledger teaches aqueous compositions. However, as far as the examiner can tell Ledger is not directed to aqueous compositions. There is no indication of the addition of water to the compositions, especially in the exemplified embodiments. The applicants have not indicated where they believe Ledger teaches aqueous compositions. In fact, Ledger specifically teaches that the formulation may be aqueous or non-aqueous based (column 7, lines 56-57).

Regarding applicants fourth argument, Inagi is not utilized for its' transdermal delivery system, it is utilized to show that ketoprofen (a specifically taught drug in Ledger) and sodium diclofenac are functional equivalents. Therefore, it would have been obvious to substitute one drug for another, when desiring a transdermal delivery system that delivers an analgesic.

Regarding applicants fifth argument, the examples in the specification are not a true side by side comparison of the closest prior art. While applicant contends that a composition comprising ammonium chloride compared to that without ammonium chloride provides superiority. This is not persuasive. The prior art teaches compositions comprising ammonium chloride. It would have been obvious to one of ordinary skill in the art to add sodium diclofenac because it is taught as a functional equivalent in the art as specified drugs and because Ledger et al. indicates that almost any drug can be incorporated. The large amounts of drugs listed indicate that the type of drug is not critical to the invention. Therefore, it would have been obvious to incorporate sodium diclofenac in the invention of Ledger et al. and thereby resulting in the instant invention with a reasonable expectation of success.

Claims 1, 7-9, 13-14 and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawaji et al. (US Patent No. 6262121) in view of Arellano et al. (European Journal of Pharmaceutical Sciences) and in further view of Porter et al. (US Patent No. 5968533).

Applicant Claims

Applicant claims a preparation comprising sodium diclofenac and ammonium chloride, wherein the ammonium chloride is blended at the range of from 0.5 to 10 fold (mole/mole) based on the sodium diclofenac.

Applicant claims a method for improving the percutaneous absorbability of sodium diclofenac comprising providing ammonium chloride in the preparation at a range from 0.5 to 10 fold mole/mole based on the sodium diclofenac.

Determination of the Scope and Content of the Prior Art (MPEP §2141.01)

Kawaji et al. teach oil patches containing diclofenac sodium and fatty acids which are combined in an adhesive (abstract). The diclofenac sodium is admixed in a solution of styrene-isoprene-styrene block copolymer (column2, lines 52-53). The amount of diclofenac sodium included is from 0.5 to 6% (column 2, lines 61-63).

Ascertainment of the Difference Between Scope of the Prior Art and the Claims *(MPEP §2141.012)*

Kawaji et al. do not specify utilizing ammonium chloride in the patch. However, this deficiency is cured by Arellano et al. and Porter et al.

Arellano et al. teach the inclusion of propylene glycol and isopropyl myristrate on the penetration of diclofenac sodium (title). The amount of propylene glycol incorporated is from 20 to 60 % and isopropyl myristate from 3 to 5% (table 1). It is taught that these agents are penetration enhancer in the topical formulations of drugs (page 129, left column, last paragraph). It is taught that the inclusion of propylene glycol and/or isopropyl myristrate provided good enhancement effects of sodium diclofenac (page 134, left column, last paragraph).

Porter et al. is directed to adhesive materials utilizing a patch to deliver active agents (abstract). It is taught that utilization of certain ingredients in the patches can increase the release rates and/or absorption rates of the active ingredients (i.e. they are

penetration enhancers). Disclosed additives which increase the release rate include ethylene glycol, polyethylene glycols and ammonium chloride (column 5, lines 20-27).

Finding of Prima Facie Obviousness Rational and Motivation (MPEP §2142-2143)

It would have been obvious to one of ordinary skill in the art to have combined the teachings of Kawaji et al., Arellano et al., and Porter et al., and utilize ammonium chloride in the invention of Kawaji et al. One of ordinary skill in the art would have been motivated to utilize ammonium chloride because it is taught by Arellano et al. that the inclusion of penetration enhancers helps with the enhancement of sodium diclofenac into the skin. One of ordinary skill in the art would have been motivated to replace propylene glycol with ammonium chloride as both are taught as functional equivalents.

It would have been obvious to one of ordinary skill in the art to combine the teachings of Kawaji et al., Arellano et al., and Porter et al., and utilize ammonium chloride in the invention of Kawaji et al. to improve the absorbability of sodium diclofenac. One of ordinary skill in the art would have been motivated to utilize the composition in this type of method as ammonium chloride is taught as a penetration enhancer by Porter et al. and penetration enhancers are known in the art to enhance the absorption of sodium diclofenac as taught by Arellano et al. The purpose of a penetration enhancer is to help the active agent absorb into the skin. Therefore, one of ordinary skill in the art would have a reasonable expectation that inclusion of penetration enhancers would enhance the absorbability of sodium diclofenac.

Regarding the claimed amount of ammonium chloride, Kawaji et al. teach that the amount of sodium diclofenac that can be incorporated is from 0.5 to 6%, which corresponds to 1.57 mmol to 18.85 mmol. Arellano et al. teach that the amount of penetration enhancer to be incorporated ranges from 3 to 60%, which correlates to 56.08 mmol to 1113.17 mmol. These amounts overlap with those instantly claimed. In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a *prima facie* case of obviousness exists. **See MPEP 2144.05 [R-5]** Furthermore, it would have been obvious to one of ordinary skill in the art at the time of the invention to engage in routine experimentation to determine optimal or workable ranges that produce expected results. Where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. ***In re Aller*, 220 F. 2d 454, 105 USPQ 233 (CCPA 1955).**

Absent any evidence to the contrary, and based upon the teachings of the prior art, there would have been a reasonable expectation of success in practicing the instantly claimed invention. Therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made.

Response to Arguments

Applicants argue that (1) Arellano describes aqueous preparations of diclofenac and propylene glycol and/or isopropyl myristate and Porter are directed to aqueous preparations. Therefore it would not have been obvious to add the penetration enhancers into the invention Kawaji which is directed to an oily preparation. .

Applicants' arguments filed November 23 2008 have been fully considered but they are not persuasive.

Firstly, it does not appear that Porter is directed to aqueous patches as none of the exemplified embodiments specifically state that water is incorporated. Since, applicants have not pointed to specific portions in Porter that teach aqueous patches, the examiner will continue to interpret Porter as directed to a non-aqueous patch.

Secondly, Arellano and Porter are directed to show that penetration enhancers, of which ammonium chloride is one specifically known in the art, are known in the art to enhance the penetration (i.e. release and/or absorption rate) of active compounds. Furthermore, it was known in the art that the penetration of sodium diclofenac can be enhanced via the use of penetration enhancers. Therefore, it would have been obvious to one of ordinary skill in the art when desiring to increase/enhance the penetration of sodium diclofenac into/through the skin to incorporate ammonium chloride into the patch composition of Kawaji which is designed to transdermally deliver sodium diclofenac.

Therefore, the rejection is maintained since applicant has not provided any persuasive arguments to overcome the rejection.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct

from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 7-9 and 13-14 and 16-17 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 16-21 of copending Application No. 10479072. Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims overlap in scope.

The instant application claims a preparation comprising sodium diclofenac and ammonium chloride, wherein the ammonium chloride is blended at the range of from 0.5 to 10 fold (mole/mole) based on the sodium diclofenac.

Copending ‘072 claims a percutaneously absorbable patch having an adhesive substrate layer which contains sodium diclofenac, an ammonium chloride, oleic acid and polyethylene glycol.

Copending ‘072 does not claim a particular amount of ammonium chloride. However, it would have been obvious to one of ordinary skill in the art to determine optimal amounts of ammonium chloride to add in the patch of copending ‘ 072. It would

have been obvious to one of ordinary skill in the art at the time of the invention to engage in routine experimentation to determine optimal or workable ranges that produce expected results. Where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. ***In re Aller*, 220 F. 2d 454, 105 USPQ 233 (CCPA 1955).**

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1, 7-9 and 13-14 and 16-17 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-4 and 7-9 of copending Application No. 10549184 in view of Arellano et al. and in further view of Porter et al. Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims overlap in scope.

The instant application claims a preparation comprising sodium diclofenac and ammonium chloride, wherein the ammonium chloride is blended at the range of from 0.5 to 10 fold (mole/mole) based on the sodium diclofenac.

Copending '184 claims a patch containing a non-steroidal anti-inflammatory. A specific anti-inflammatory claimed is diclofenac and its pharmacological acceptable salt.

Copending '184 does not claim the addition of ammonium chloride. However, this deficiency is cured by Arellano et al. and Porter et al.

Arellano et al. teach the include of propylene glycol and isopropyl myristrate on the penetration of diclofenac sodium (title). The amount of propylene glycol incorporated is from 20 to 60 % and isopropyl myristate from 3 to 5% (table 1). It is taught that these agents are penetration enhancer in the topical formulations of drugs (page 129, left column, last paragraph). It is taught that the inclusion of propylene glycol and/or isopropyl myristrate provided good enhancement effects of sodium diclofenac (page 134, left column, last paragraph).

Porter et al. is directed to adhesive materials utilizing a patch to deliver active agents (abstract). It is taught that utilization of certain ingredients in the patches can increase the release rates and/or absorption rates of the active ingredients (i.e. they are penetration enhancers). Disclosed additives which increase the release rate include ethylene glycol, polyethylene glycols and ammonium chloride (column 5, lines 20-27).

It would have been obvious to one of ordinary skill in the art to combine the teachings of copending '184, Arellano et al., and Porter et al. and utilize ammonium chloride to enhance the penetration of diclofenac sodium. One of ordinary skill in the art would have been motivated to utilize ammonium chloride in the composition of copending '184 and subsequently the composition in instant type of method as ammonium chloride is taught as a penetration enhancer by Porter et al. and penetration enhancers are known in the art to enhance the absorption of sodium diclofenac as taught by Arellano et al. The purpose of a penetration enhancer is to help the active agent absorb into the skin. Therefore, one of ordinary skill in the art would have a

reasonable expectation that inclusion of penetration enhancers would enhance the absorbability of sodium diclofenac.

Regarding the claimed amount of ammonium chloride, copending '184 claims that the amount of sodium diclofenac that can be incorporated is from 1-25 %, which corresponds to 3.19 mmol to 78.6 mmol. Arellano et al. teach that the amount of penetration enhancer to be incorporated ranges from 3 to 60%, which correlates to 56.08 mmol to 1113.17 mmol. These amounts overlap with those instantly claimed. In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a *prima facie* case of obviousness exists. **See MPEP 2144.05 [R-5]** Furthermore, it would have been obvious to one of ordinary skill in the art at the time of the invention to engage in routine experimentation to determine optimal or workable ranges that produce expected results. Where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. ***In re Aller*, 220 F. 2d 454, 105 USPQ 233 (CCPA 1955).**

This is a provisional obviousness-type double patenting rejection.

Claims 1, 7-9 and 13-14 and 16-17 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-11 of copending Application No. 10/584739 in view of Arellano et al. and in further view of Porter et al. Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims overlap in scope.

The instant application claims a preparation comprising sodium diclofenac and ammonium chloride, wherein the ammonium chloride is blended at the range of from 0.5 to 10 fold (mole/mole) based on the sodium diclofenac.

Copending '739 claims a patch comprising an anti-inflammatory. Polymers are claimed as being included. A specific anti-inflammatory claimed is diclofenac and its pharmaceutically acceptable salt.

Copending '739 does not claim the addition of ammonium chloride. However, this deficiency is cured by Arellano et al. and Porter et al.

The teachings of Arellano et al. and Porter et al. are set forth above.

It would have been obvious to one of ordinary skill in the art to combine the teachings of copending '739, Arellano et al., and Porter et al. and utilize ammonium chloride to enhance the penetration of diclofenac sodium. One of ordinary skill in the art would have been motivated to utilize ammonium chloride in the composition of copending '739 and subsequently the composition in the instant method as ammonium is taught as a penetration enhancer by Porter et al. and penetration enhancers are known in the art to enhance the absorption of sodium diclofenac as taught by Arellano et al. The purpose of a penetration enhancer is to help the active agent absorb into the skin. Therefore, one of ordinary skill in the art would have a reasonable expectation that inclusion of penetration enhancers would enhance the absorbability of sodium diclofenac.

Regarding the claimed amount of ammonium chloride, Arellano et al. teach that the amount of penetration enhancer to be incorporated ranges from 3 to 60%, which

correlates to 56.08 mmol to 1113.17 mmol. Copending '739 does not claim a specific amount of active, however, it would have been obvious to one of ordinary skill in the art at the time of the invention to engage in routine experimentation to determine optimal or workable ranges that produce expected results. Where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. ***In re Aller*, 220 F. 2d 454, 105 USPQ 233 (CCPA 1955).**

This is a provisional obviousness-type double patenting rejection.

Claims 1, 7-9 and 13-14 and 16-17 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-10 of copending Application No. 11596605 in view of Arellano et al. and in further view Porter et al. Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims overlap in scope.

The instant application claims a preparation comprising sodium diclofenac and ammonium chloride, wherein the ammonium chloride is blended at the range of from 0.5 to 10 fold (mole/mole) based on the sodium diclofenac.

Copending '605 claims a percutaneous preparation comprising a non-steroidal anti-inflammatory analgesic. A specific analgesic claimed is diclofenac and its pharmaceutically acceptable salt.

Copending '605 does not claim the addition of ammonium chloride. However, this deficiency is cured by Arellano et al. and Porter et al.

The teachings of Arellano et al. and Porter et al. are set forth above.

It would have been obvious to one of ordinary skill in the art to combine the teachings of copending '605, Arellano et al., and Porter et al. and utilize ammonium chloride to enhance the penetration of diclofenac sodium. One of ordinary skill in the art would have been motivated to utilize ammonium chloride in the composition of copending '605 and subsequently the composition in instant method as ammonium is taught as a penetration enhancer by Porter et al. and penetration enhancers are known in the art to enhance the absorption of sodium diclofenac as taught by Arellano et al. The purpose of a penetration enhancer is to help the active agent absorb into the skin. Therefore, one of ordinary skill in the art would have a reasonable expectation that inclusion of penetration enhancers would enhance the absorbability of sodium diclofenac.

Regarding the claimed amount of ammonium chloride, copending '605 claims that the amount of sodium diclofenac that can be incorporated is from 0.1 to 10 %, which corresponds to 0.314 mmol to 31.4 mmol. Arellano et al. teach that the amount of penetration enhancer to be incorporated ranges from 3 to 60%, which correlates to 56.08 mmol to 1113.17 mmol. These amounts overlap with those instantly claimed. In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a *prima facie* case of obviousness exists. **See MPEP 2144.05 [R-5]** Furthermore, it would have been obvious to one of ordinary skill in the art at the time of the invention to engage in routine experimentation to determine optimal or workable ranges that produce expected results. Where the general conditions of a claim are disclosed in the

prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. ***In re Aller*, 220 F. 2d 454, 105 USPQ 233 (CCPA 1955).**

This is a provisional obviousness-type double patenting rejection.

Claims 1, 7-9 and 13-14 and 16-17 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-11 and 13 -15 of copending Application No. 10258022 in view of Arellano et al. and in further view Porter et al. Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims overlap in scope.

The instant application claims a preparation comprising sodium diclofenac and ammonium chloride, wherein the ammonium chloride is blended at the range of from 0.5 to 10 fold (mole/mole) based on the sodium diclofenac.

Copending '022 claims a plaster having adhesion to the skin consisting essentially of a styrene-isoprene-styrene block copolymer and 0.1 to 8% of an anti-inflammatory. A specific anti-inflammatory claimed is diclofenac.

Copending '022 does not claim the addition of ammonium chloride. However, this deficiency is cured by Arellano et al. and Porter et al.

The teachings of Arellano et al. and Porter et al. are set forth above.

It would have been obvious to one of ordinary skill in the art to combine the teachings of copending '022, Arellano et al., and Porter et al. and utilize ammonium chloride to enhance the penetration of diclofenac sodium. One of ordinary skill in the art

would have been motivated to utilize ammonium chloride in the composition of copending '022 and subsequently the composition in the instant method as ammonium is taught as a penetration enhancer by Porter et al. and penetration enhancers are known in the art to enhance the absorption of sodium diclofenac as taught by Arellano et al. The purpose of a penetration enhancer is to help the active agent absorb into the skin. Therefore, one of ordinary skill in the art would have a reasonable expectation that inclusion of penetration enhancers would enhance the absorbability of sodium diclofenac.

Regarding the claimed amount of ammonium chloride, copending '605 claims that the amount of sodium diclofenac that can be incorporated is from 0.1 to 8 %, which corresponds to 0.314 mmol to 25.14 mmol. Arellano et al. teach that the amount of penetration enhancer to be incorporated ranges from 3 to 60%, which correlates to 56.08 mmol to 1113.17 mmol. These amounts overlap with those instantly claimed. In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a *prima facie* case of obviousness exists. **See MPEP 2144.05 [R-5]** Furthermore, it would have been obvious to one of ordinary skill in the art at the time of the invention to engage in routine experimentation to determine optimal or workable ranges that produce expected results. Where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. ***In re Aller*, 220 F. 2d 454, 105 USPQ 233 (CCPA 1955).**

This is a provisional obviousness-type double patenting rejection.

Response to Arguments

Applicant's arguments filed November 23 2008 are acknowledged. The rejections are maintained since applicant has not made any substantive arguments traversing the rejection.

Regarding copending 10/584739, the recitation in the previous Office action of 10/548769 is an obvious typographical error and the examiner has corrected this typo.

Regarding copending 10/549184, this as well as a typographical error, as indicated above, copending claims are 1-4 and 7-9.

Conclusion

No claims are allowed.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ABIGAIL FISHER whose telephone number is (571)270-3502. The examiner can normally be reached on M-Th 9am-6pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Abigail Fisher
Examiner
Art Unit 1616

AF

/Mina Haghighatian/
Primary Examiner, Art Unit 1616